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| 10/086,910 | 02/28/2002 | Ching Yao Huang | Huang 14-1-2-1 | 1674 |
| 46290 | 7590 | 05/24/2005 | EXAMINER | |
| WILLIAMS, MORGAN & AMERSON/LUCENT 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042 | | | CHO, UN C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2687 | |

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,910

Applicant(s)

HUANG ET AL.

Examiner

Un C Cho

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 3, 6 – 7, 10, 11, 15, 18 – 20, 23 – 25, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corriveau et al. (US 5,918,177) in view of Streter (US 6,456,858 B1).

Regarding claim 1, Corriveau discloses an apparatus (MSC) for wirelessly paging a mobile device using a network operating according to multiple wireless technologies (MSC communicates with the mobile station through its base station via radio frequency) based at least in part on a technological capability of the mobile device (called mobile station's expected service type), the apparatus comprising: processing circuitry (service code generator Fig. 6, 51, service code comparison mechanism, Fig. 6, 53, paging mechanism, Fig. 6, 52, Col. 5, lines 8 – 21) configured to access information associated with the technological capability of the mobile device (called mobile station's expected service type) and to generate a paging request for the mobile device that is based at least partially on the technological capability of the mobile device (called mobile station's expected service type, Corriveau, Col. 5, lines 44 – 49).

However, Corriveau as applied above does not specifically disclose determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network and paging when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network. In an analogous art, Streter discloses determining whether the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network and paging when the wireless technology of the mobile unit corresponds to at least one of the multiple wireless technologies of the network (Streter, Col. 3, line 5 through Col. 4, line 29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Streter to the system of Corriveau in order to provide an arrangement that enables a dual-telephone system to redirect dual-mode telephones to access an alternative wireless telephone system based on detected traffic conditions in the digital wireless communication system.

Regarding claim 2, Corriveau in view of Streter as applied to claim 1 above discloses that the paging request is based at least partially on an identifier associated with the mobile device to be paged (Electronic Serial Number / Mobile Identification Number, Fig. 3, Corriveau, Col. 4, lines 53 – 58).

Regarding claim 3, Corriveau in view of Streter as applied to claim 1 above discloses that the apparatus (MSC-1) is in communication with a wireless network (Base Station, BS-1) that comprises at least one cell (BS-1 controlling

associated cell), said at least one cell being configured to receive the paging request generated by the processing circuitry and to wireless broadcast the paging request via an antenna of the network to enable said at least one cell to wirelessly communicate with the mobile device being paged (BS-1 receiving paging order and broadcasting to the respective MS, Corriveau, Col. 3, line 65 through Col. 4, line 2).

Regarding claim 6, Corriveau in view of Streter as applied to claim 3 above discloses that the technological capability (expected service type) corresponds to one or more specific channels (Frequency Shift Keying Control Channel, FSK CC) over which the mobile device being paged is capable of communicating and over which said at least one cell (BS-1) is capable of communicating with mobile device (Corriveau, Col. 3, lines 19 – 29 and line 65 through Col. 4, line 2).

Regarding claim 7, Corriveau in view of Streter as applied to claim 3 above discloses that the processing circuitry (service code generator Fig. 6, 51, service code comparison mechanism, Fig. 6, 53, paging mechanism, Fig. 6, 52, Corriveau, Col. 5, lines 8 – 21) is comprised at a MSC of the wireless network, and wherein the technological capability (expected service type) of the mobile device is stored at the MSC of the wireless network (Corriveau, Col. 5, lines 44 – 49), the MSC being the home MSC (MSC-1) of the mobile device (Corriveau, Col. 3, lines 58 – 60).

Regarding claim 10, Corriveau in view of Streter as applied to claim 7 above discloses that when the mobile device is to be paged, the MSC generates a paging order that is broadcast only to mobile devices that have the same technological capability (expected service type) of the mobile device being paged (Corriveau, Col. 3, line 65 through Col. 4, line 2 and Col. 5, lines 44 – 49).

Regarding claim 11, Corriveau in view of Streter as applied to claim 7 above discloses that the MSC (MSC-1, MSC-2) is a serving MSC of the mobile device and wherein the serving MSC determines when the mobile device has registered with the network comprising the serving MSC (mobile device pages one of the bordering MSC, Corriveau, Col. 3, lines 19 – 35) and wherein the serving MSC obtains information relating to the technological capability of the mobile device (mobile station's expected service type) from the home MSC (MSC-1 and MSC-2 communicates relevant information through internal signaling) of the mobile device (Corriveau, Col. 4, lines 11 – 52) and wherein the serving MSC (MSC-1, MSC-2) uses the information obtained by the home MSC when generating a page order for the mobile device that is based at least partially on the information obtained from the home MSC relating to the technological capability of the mobile device (mobile station's expected service type) (Corriveau, Col. 3, line 50 through Col. 4, line 10 and Col. 5, lines 44 – 49).

Regarding claim 15, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 18, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 19, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 20, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 23, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 24, Corriveau in view of Streter as applied to claim 18 above discloses that the processing circuitry (service code generator Fig. 6, 51, service code comparison mechanism, Fig. 6, 53, paging mechanism, Fig. 6, 52, Corriveau, Col. 5, lines 8 – 21) is comprised at a MSC of the wireless network, and wherein the technological capability (expected service type) of the mobile device is stored at the MSC of the wireless network (Corriveau, Col. 5, lines 44 – 49).

Regarding claim 25, Corriveau in view of Streter as applied to claim 24 above discloses that the MSC is the home MSC (serving MSC-1) of the mobile device (Corriveau, Col. 3, lines 58 – 60).

Regarding claim 28, the claim is interpreted and rejected for the same reason as set forth in claim 10.

Regarding claim 29, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Art Unit: 2687

3. Claims 4, 5, 13, 14, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corriveau in view of Streter as applied to claim 1 above, and further in view of La Medica, Jr. et al (US 6,625,451).

Regarding claim 4, Corriveau in view of Streter discloses wirelessly broadcasting paging order to mobile devices (Corriveau, Col. 3, line 65 through Col. 4, line 2).

However, Corriveau does not specifically disclose that the technological capability includes a wireless protocol technology that said at least one cell utilizes to wirelessly broadcast paging requests to mobile devices that have the technological capability to wirelessly communicate using said wireless protocol technology. In an analogous art, La Medica discloses that the technological capability includes a wireless protocol technology (CDMA protocol IS-95) that at least one cell (base stations) utilizes to communicate with mobile devices that have the technological capability to wirelessly communicate using said wireless protocol technology (CDMA protocol IS-95, La Medica, Col. 10, lines 49 – 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of La Medica to the system of Corriveau and Streter in order to provide a system selection techniques by providing user selectable modes of operation, which allow certain fall-back options when a preferred system may not be available, but still steers the bulk of the system selection operations to preferred systems.

Regarding claim 5, Corriveau in view of Streter and further in view of La Medica as applied to claim 4 above discloses wirelessly broadcasting paging order to mobile devices (Corriveau, Col. 3, line 65 through Col. 4, line 2) and that the technological capability corresponds to band classes (analog and/or digital) over which said at least one cell (base stations) is configured to wirelessly communicate with mobile devices and over which the mobile device is configured to wirelessly communicate (La Medica, Col. 10, lines 49 – 67).

Regarding claim 13, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 14, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 21, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 22, the claim is interpreted and rejected for the same reason as set forth in claim 5.

4. Claims 8, 9, 16, 17, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corriveau in view of Streter and further in view of Lamb et al. (US 6,697,620).

Regarding claim 8, Corriveau in view of Streter as applied to claim 7 above does not specifically disclose that the technological capability of the mobile device is stored in a HLR of the home MSC. In an analogous art, Lamb

discloses that the user profile of the mobile device is stored in a HLR of the home MSC (Lamb, Col. 1, lines 38 – 57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Lamb to the system of Corriveau and Streter in order to provide a method and system for providing seamless, wireless telecommunication services to customers that move between disparate networks.

Regarding claim 9, Corriveau in view of Streter and further in view of Lamb discloses that the user profile of the mobile device is stored in a VLR of the home MSC (Lamb, Col. 1, lines 38 – 57).

Regarding claim 16, the claim is interpreted and rejected for the same reason as set forth in claim 8.

Regarding claim 17, the claim is interpreted and rejected for the same reason as set forth in claim 9.

Regarding claim 26, the claim is interpreted and rejected for the same reason as set forth in claim 8.

Regarding claim 27, the claim is interpreted and rejected for the same reason as set forth in claim 9.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corriveau in view of Streter, in view of Lamb and in view of De Oliveira (US 6,763,004)

Regarding claim 12, Corriveau in view of Streter in view of Lamb discloses that the MSC generates a paging order that is broadcast only to mobile devices

that have the same technological capability (expected service type) of the mobile device being paged (Corriveau, Col. 3, line 65 through Col. 4, line 2 and Col. 5, lines 44 – 49) and also discloses that the home MSC accesses the registration information and includes the registration information in the user profile when signaling is generated (Lamb, Col. 1, lines 38 – 57).

However, Corriveau in view of Streter, in view of Lamb as applied above does not specifically disclose that the mobile device being paged is first broadcast in a last zone in which the mobile device being paged registered with the network. In an analogous art, De Oliveira discloses that the mobile device being paged is first broadcast in a last known location in which the mobile device being paged registered with the network (Col. 1, lines 15 – 26) and in the same field of endeavor, Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of De Oliveira to the modified system of Corriveau, Streter and Lamb in order to provide an improved system and method for transmitting page messages from MSCs to BSs in a cellular network that eliminates the heavy signaling burden.

Response to Arguments

6. Applicant's arguments with respect to claims 1 – 29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (571)272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2687

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SONNY TRINH
PRIMARY EXAMINER

Un C Cho
Examiner
Art Unit 2687

5/16/05 uc